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Strategies for Managing Additional Income to Maintain Financial Stability among Porang Farming Households

Ayu Amdira[1*], Wa Ode Rayyani[2]

Management Study Program, Faculty of Economics and Business, Muhammadiyah University of Makassar[1,2]

***Corresponding author:** waode.rayyani@unismuh.ac.id |

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Abstract

Purpose: This study aims to explore additional income management strategies for maintaining the financial stability of porang farming households in Bulukumpa District, Bulukumba Regency, where farmers face relatively long harvesting periods and fluctuating commodity prices.

Research Methodology: This study employed a descriptive qualitative approach. Data were collected through in-depth interviews, observations, and documentation involving porang farmers who earned additional income. Data were analyzed using data reduction, data display, and conclusion drawing.

Results: The findings reveal that farmers generated additional income from both agricultural and non-agricultural activities, including cultivating other crops, working as agricultural laborers, construction workers, livestock farming, and small-scale trading. This additional income was managed based on priority needs to cover household expenses, educational costs, savings, emergency funds, and farming capital. Income diversification, supported by planned financial management, helped maintain household cash flow, reduce the risk of income instability, and sustain both farming activities and family economic well-being.

Conclusions: Income diversification and priority-based financial management are essential strategies for strengthening the financial stability of porang farming households.

Limitations: This study adopted a qualitative approach with a limited number of informants and therefore did not quantitatively measure the contribution of additional income to household financial stability.

Contribution: This study provides empirical evidence on additional income management strategies that can serve as a reference for promoting financial literacy, farmer empowerment, and the formulation of policies aimed at enhancing the economic resilience of porang farming households.

Keywords: *Additional Income, Financial Stability, Household Financial Management, Income Diversification, Porang Farmers*

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1. Introduction

Indonesia is a country where the majority of the population earns a living through agriculture. Its tropical climate and vast expanses of fertile land have made agriculture one of the most important sectors of the national economy. Consequently, agricultural products have become one of the contributors to Indonesia foreign exchange earnings (Nuraina & Styaningrum, 2021). The agricultural sector serves as a fundamental pillar of the Indonesian economy by making significant contributions to food production, employment generation, and income creation for rural communities. In the era of agricultural modernization, the diversification of high-value agricultural commodities has become a strategic approach to improving farmers' welfare.

The development of the agricultural sector is one of the key strategies for accelerating future economic growth. Agro-industry, as a subsystem of agribusiness, has considerable potential to stimulate economic development because it offers broad market opportunities and substantial value-added potential (Sector et al., 2015). Furthermore, agricultural development is directed toward increasing agricultural production to meet domestic food and industrial demands, expanding exports, improving farmers' incomes, creating employment opportunities, and promoting equitable business opportunities (Lailatul Maulidyani, 2023). Currently, various agricultural commodities with promising potential as alternative food sources are being developed in response to the increasing demand for food. This initiative aims to reduce society's dependence on rice as the primary staple food by encouraging the utilization of other food sources, particularly tuber crops. One of the tuber crops that has recently attracted considerable attention is porang (*Amorphophallus muelleri* Blume) (Rahayuningsih, 2020).

Porang has long been recognized by local communities since the Japanese occupation era. Initially, porang grew sporadically in forests and around residential areas. The plant can be found on the islands of Sumatra, Java, Flores, West Nusa Tenggara, and East Nusa Tenggara. However, the economic potential of porang was previously not widely recognized by the public, resulting in its limited utilization and development (Yuliantina et al., 2023). Porang is a herbaceous plant that produces underground tubers. It grows well in forested areas because it requires only 50–60% sunlight exposure. The plant thrives in dry, humus-rich soils with a pH ranging from 6 to 7. Its tubers develop beneath the soil surface, and these underground tubers constitute the primary harvested product (Siswanto, 2016).

Porang tubers have numerous applications because they belong to the *Araceae* family and contain a high concentration of glucomannan, ranging from 15% to 64% on a dry-weight basis. The high glucomannan content has made porang increasingly sought after, particularly by the food and health industries (Aanisah, Wardhana, Chaerunisaa, & Budiman, 2022). In the health sector, glucomannan is recognized for its potential to alleviate several health conditions, including diabetes, high cholesterol, and obesity, while also contributing to weight management and various other health benefits. Porang tubers can be processed into a wide range of healthy food products, including shirataki rice, the traditional Japanese food *konnyaku*, flour, cake ingredients, ice cream, bread, jam, and jelly products with low sugar content.

Bulukumba Regency, particularly Bulukumpa District, is one of the regions that has actively responded to the opportunities presented by porang cultivation. The characteristics of Bulukumpa District, which are dominated by dryland areas as well as rubber, coffee, and clove plantations, provide highly favorable agroclimatic conditions for porang cultivation, as the crop requires partial shading for optimal growth. Farmers have recognized the substantial economic potential of porang due to its high market value, making it a highly prospective commodity for further development. Once the porang tubers reach maturity, harvesting can be carried out, and the larger the tubers, the higher the market value they command (Suma, 2025).

From an economic perspective, porang cultivation is considered more profitable because it offers higher and relatively faster returns than many other agricultural commodities, such as rice, maize, rubber, coffee, and sugarcane. Porang possesses significant economic value and considerable export potential. According to data from the Indonesian Agricultural Quarantine Agency (2021), the export value of porang increased by 160%, with exports rising from 5.7 thousand tons in the first semester of 2019 to 14.8 thousand tons during the first semester of 2021 (Yunia Rahayuningsih, 2021). Nevertheless, porang prices tend to fluctuate due to changes in production levels, market demand, tuber quality, glucomannan content, as well as farmers' access to markets and processing industries. Such price instability may create income shocks for farmers who have invested substantial capital in porang cultivation. In addition, the seasonal nature of porang cultivation, coupled with its relatively long harvesting period, creates cash flow gaps because farmers do not receive regular income during the crop growth cycle, while household expenditures must continue to be met. This condition encourages porang farmers to seek additional sources of income from both agricultural and non-agricultural activities as a strategy for maintaining household financial stability and sustaining their family economy amid the uncertainty of income generated from porang farming.

Income diversification is not merely regarded as an effort to increase the total income of farming households but also as an adaptive strategy for coping with economic risks arising from production uncertainty, commodity price fluctuations, and climate-related disturbances. Farming households with multiple sources of income generally possess a greater capacity to maintain household consumption when their primary source of income declines. Income diversification enables farmers to generate a more stable cash flow, thereby reducing their dependence on a single agricultural commodity. Therefore, diversification represents an important risk management strategy for farming households in sustaining their economic well-being (Wirakusuma, 2020). In addition to having diverse income sources, the ability to manage income effectively is another critical factor in strengthening the economic resilience of farming households. Because farmers' income is generally seasonal, households must establish spending priorities, distinguish between consumption expenditures and farming investment needs, and allocate reserve funds to cope with unforeseen circumstances. Sound financial management not only enables households to meet their short-term needs but also supports the sustainability of farming activities by ensuring the availability of capital for subsequent planting seasons. Conversely, poorly planned financial management may result in all household income being spent on consumption, thereby increasing household vulnerability to economic shocks (Adrianus et al., 2023).

In the context of porang cultivation, effective income management is particularly important because this commodity is characterized by a relatively long harvesting period and highly fluctuating market prices. These conditions present significant challenges for farmers in maintaining household cash flow while waiting for the harvest period. Consequently, additional income generated from both agricultural and non-agricultural activities serves not only as an alternative source of earnings but also as a financial instrument for maintaining household financial stability. Such income can be allocated to meet household consumption needs, finance children's education, establish emergency savings, and provide working capital for farming activities, thereby ensuring the continuity and sustainability of porang cultivation.

Based on these conditions, research on additional income management strategies among porang farming households has become increasingly important. Most previous studies have primarily focused on the technical aspects of porang cultivation, productivity, business feasibility, and marketing, whereas studies examining how farming households manage additional income to maintain household financial stability remain relatively limited, particularly among porang farmers in Bulukumpa District, Bulukumba Regency. Therefore, this study is expected to provide an empirical contribution to the literature on household financial management among farming communities and to serve as a basis for developing farmer empowerment programs and improving financial literacy in rural areas (Vivi Harmika Putri, Isharijadi, 2021).

Farmers' ability to manage additional income is a crucial factor in maintaining household financial stability amid income uncertainty caused by price fluctuations and the seasonal nature of porang cultivation. Poor financial management practices, such as failing to separate farming capital from household consumption, not maintaining emergency savings, and exhibiting excessive consumption behavior during periods of higher income, may increase the economic vulnerability of farming households. Conversely, farmers who are able to diversify their income sources and allocate additional income effectively tend to demonstrate greater economic resilience in coping with farming-related risks. Existing studies on porang cultivation in South Sulawesi have largely concentrated on technical cultivation practices, business feasibility, and marketing aspects, whereas research examining additional income management strategies adopted by farming households to cope with income fluctuations, particularly in Bulukumpa District, remains relatively scarce. Based on the foregoing background, this study aims to analyze additional income management strategies for maintaining the financial stability of porang farming households in Bulukumpa District, Bulukumba Regency.

2. Literature Review and Hypothesis/es Development

2.1 Household Financial Management of Farming Households

Household financial management is the process of achieving financial goals through structured and appropriate financial management. Many households still lack financial planning to achieve their financial objectives, as they often assume that the future will always be favorable or simply accept whatever circumstances arise. Although it is impossible to plan for every eventuality, proper financial planning enables families to make better decisions and achieve more favorable outcomes. Therefore, it is essential for every household to implement effective household financial management practices (Inkam, 2022). Managing household finances requires careful planning and appropriate allocation of financial resources. Households often encounter unexpected needs that cause expenditures to exceed the planned budget, thereby affecting routine household spending (Desy Nur Pratiwi & Yuwita Ariessa Pravasanti, 2023).

The complexity of financial management in farming households becomes even more challenging due to the seasonal and unpredictable nature of agricultural income. Each planting cycle presents its own financial challenges, beginning with initial investments in quality seeds, fertilizer procurement, labor costs, and other operational expenses directly related to agricultural activities. External factors such as weather conditions, fluctuations in agricultural commodity prices, and market accessibility are critical variables influencing the income and expenditure of farming households.

Household financial management among farmers is not limited to regulating income and expenditure but also includes the ability to plan the use of income to meet both short-term and long-term needs. Effective financial planning enables farming households to prioritize their needs, avoid unproductive expenditures, and prepare reserve funds to cope with income reductions caused by crop failure or commodity price fluctuations. Consequently, sound financial management contributes to improving household welfare and ensuring the sustainability of farming activities. Furthermore, the ability to maintain simple financial records constitutes an important component of household financial management. Through financial record-keeping, farmers can monitor their income, expenditures, and remaining funds that can be allocated to savings or farming capital for the next planting season. The practice of maintaining simple bookkeeping records enables farmers to make more rational economic decisions and reduces the risk of inefficient income utilization (Adrianus et al., 2023).

2.2 Income Diversification of Farming Households

Income diversification is a strategy through which households generate income from multiple sources rather than relying on a single source of earnings (Windie Yustyarani, 2020). Income diversification refers to the existence of multiple income-generating activities. In rural areas, income diversification enables farming households to reduce their dependence on a single agricultural commodity and achieve greater economic stability. Successful income diversification requires market analysis, careful planning, and the ability to adapt to changes in consumer demand and market trends. It is also essential to maintain product quality, encourage innovation, and continuously explore new opportunities in the agricultural and tourism sectors (Hidayat, 2023).

In the context of farming households, income diversification encompasses various sources of income, including primary agricultural production, off-farm employment, trading or service activities, and investments in other sectors. Such diversification helps reduce the risk of income loss and strengthens the economic stability of farming households.

Income diversification is widely recognized as an economic adaptation strategy adopted by farming households to reduce dependence on a single source of income. Through diversification, farmers generate income from a variety of economic activities, including the cultivation of other agricultural commodities, livestock farming, trading, and employment outside the agricultural sector. This strategy reduces the risk of income loss when one business activity experiences declining production or falling market prices, thereby contributing to greater household economic stability.

2.3 Financial Stability of Farming Households

Household financial stability refers to the condition in which household finances are managed effectively and appropriately, ensuring that the financial situation remains secure and under control. This condition involves careful financial planning, cooperation among household members, implementation of financial plans, financial supervision, and continuous monitoring (Ratnaningtyas & Swantari, 2021). It also encompasses the household's ability to balance income and expenditure, manage savings, and anticipate financial risks so that its financial condition remains healthy and resilient to economic crises (Bufe, Roll, Kondratjeva, Skees, & Grinstein-Weiss, 2022).

An in-depth analysis of the financial management patterns of farming households is important not only for understanding household financial dynamics but also for identifying innovative strategies that can enhance the financial stability of farming families. The income of farming households is generally seasonal and uncertain due to fluctuations in agricultural commodity prices and continuously increasing production costs, making it a major challenge to maintaining household economic stability. The financial stability of farming households reflects their ability to maintain a sustainable balance between income and expenditure over time. Households with strong financial stability are generally able to meet their basic needs, maintain emergency savings, and continue their economic activities even when experiencing temporary declines in income. Therefore, household financial stability is determined not only by the amount of income earned but also by the household's ability to manage its financial resources effectively.

2.4 Additional Income of Farming Households

Additional income refers to earnings generated from secondary or side businesses, representing income obtained outside an individual's primary occupation or main economic activity. Such additional income can be directly utilized to support or supplement the primary source of household income (Anggia Ramadhan & Radiyan Rahim, 2023). Limited household income encourages farming households to seek additional earnings from various sources, both within and outside the agricultural sector. Income-generating activities undertaken by farmers are generally classified into three subsectors: on-farm, off-farm, and non-farm. The on-farm and off-farm subsectors represent income derived from agricultural activities, whereas the non-farm subsector comprises income sources unrelated to agriculture (Mudatsir et al., 2021).

The primary income of farming households generally originates from agricultural activities, including food crop cultivation, horticulture, livestock farming, and fisheries. However, agricultural income is often unstable because it is influenced by factors such as weather conditions, commodity price fluctuations, and planting seasons. Consequently, many farming households seek additional income through off-farm employment, such as migrant labor, construction work, tailoring, or other service-related occupations. Some households also engage in small-scale business activities outside agriculture to increase their household income (Polimango et al., 2025). Additional income serves as an alternative source of earnings that strengthens the economic resilience of farming households. The availability of additional income enables farmers to continue meeting household consumption needs, educational expenses, healthcare costs, and farming capital requirements when their primary income declines. Therefore, the better a household's ability to manage additional income, the greater its opportunity to achieve long-term household economic stability.

2.5 Porang Farmers

Porang (*Amorphophallus muelleri* Blume), a member of the *Araceae* family, is one of Indonesia's valuable tuber crops that grows in tropical and subtropical regions. Porang has long been utilized as a food source containing carbohydrates, fats, proteins, minerals, vitamins, and dietary fiber, while also serving as an important raw material for industrial processing and export. In addition, porang has traditionally been recognized for its medicinal properties and is believed to be beneficial in treating hemorrhoids, asthma, dysentery, and stomach disorders (Suriadi, & Belakang, 2021; Wahidah, & Afiati, 2021).

Porang is considered a promising export commodity because of the growing international demand for its use in both the food and industrial sectors. Indonesia exports porang in the form of dried chips and flour to several countries, including Japan, Australia, Sri Lanka, Malaysia, South Korea, New Zealand, Pakistan, the United Kingdom, and Italy. Demand for both fresh porang tubers and dried porang chips has continued to increase (Sulistiyo & Soetopo, 2014).

In recent years, porang (*Amorphophallus muelleri*) has gained considerable popularity due to the increasing demand in international markets, encouraging many farmers to cultivate this commodity (Riptanti, Irianto, & Mujiyo, 2022). Despite its promising economic prospects, porang farmers continue to face numerous challenges, including price fluctuations, market uncertainty, and seasonal income resulting from the relatively long harvesting period (Endang, Joni, Ikhwan, & Muhammad, 2022). These conditions cause household income among porang farmers to remain unstable, prompting many farmers to diversify their economic activities or seek additional sources of income to meet household needs. Consequently, effective management of additional income has become essential for maintaining household financial stability and ensuring the long-term economic sustainability of porang farming families (Aldillah, Mahatma, & Bakti, 2023).

Although porang cultivation offers substantial economic potential, it continues to face several challenges, including fluctuating market prices, changing market demand, and relatively long harvesting periods. These conditions require porang farming households to implement income diversification strategies and effective financial management practices to ensure that household needs can be met while waiting for harvest. Therefore, the success of porang farming depends not only on cultivation practices but also on farmers' ability to manage household economic risks effectively.

3. Research Methodology

3.1 Research Design

This study employed a qualitative approach using a descriptive research design to obtain an in-depth understanding of the strategies adopted by porang farming households in managing additional income to maintain household financial stability. A qualitative approach was considered appropriate because it allows researchers to explore participants' experiences, perceptions, and financial management practices within their real-life contexts. The study was conducted in Bulukumpa District, Bulukumba Regency, South Sulawesi, Indonesia, one of the major porang cultivation areas in the region.

Research informants were selected using a purposive sampling technique. The informants consisted of porang farmers who had additional sources of income outside their primary porang farming activities. They were selected based on the following criteria: (1) actively cultivating porang, (2) having additional income from either agricultural or non-agricultural sectors, and (3) being willing to participate in the study and provide information relevant to the research objectives. A total of four key informants participated in the study and were considered capable of providing comprehensive information regarding additional income management strategies within porang farming households.

3.2 Data Collection

Primary data were collected through in-depth interviews, direct observations, and documentation. In-depth interviews were conducted using a semi-structured interview guide designed to obtain detailed information regarding additional income sources, income management strategies, and efforts undertaken to maintain household financial stability. The interview format allowed informants to describe their experiences and financial management practices openly while enabling the researcher to explore emerging issues in greater depth. Observations were conducted to obtain a direct understanding of the informants' economic activities and household financial practices. Meanwhile, documentation, including field notes and relevant supporting documents, was used to complement and verify the information obtained from interviews and observations.

3.3 Data Analysis

The collected data were analyzed using the interactive model proposed by Miles, Huberman, and Saldaña, which consists of three stages: data reduction, data display, and conclusion drawing and verification. Data reduction involved selecting, organizing, and simplifying the interview and observation data to identify information relevant to the research objectives. Subsequently, the reduced data were systematically presented in the form of narrative descriptions to facilitate interpretation and identify recurring patterns. Finally, conclusions were drawn and continuously verified by comparing information obtained from different informants as well as supporting evidence from observations and documentation to ensure the credibility and consistency of the research findings.

4. Results and Discussions

4.1 Additional Income Sources of Porang Farming Households

Based on the interviews conducted with porang farmers in Bulukumpa District, Bulukumba Regency, it was found that most farming households do not rely solely on porang cultivation as their primary source of income. This is mainly due to the relatively long harvesting period of porang and the fact that income from porang farming is not received regularly every month. Consequently, farmers diversify their sources of income to meet their household needs.

Informant 1 explained:

> *"When the porang has not yet been harvested, I usually sell the produce from my other crops, such as rice, cloves, coffee, chili peppers, coconuts, and bananas. I also help my neighbors harvest cloves. The money I earn is used for daily necessities such as cooking oil, fish, electricity bills, and my children's school expenses."*

The informant's statement indicates that porang farming households do not depend on a single source of income. The relatively long harvesting period encourages farmers to utilize income from other agricultural commodities and to work as agricultural laborers in order to continue generating earnings. This additional income is prioritized to meet essential household needs, including food consumption, electricity payments, and children's educational expenses. These findings demonstrate that income diversification serves as an adaptive strategy for maintaining household economic sustainability while waiting for income from porang cultivation.

In addition to selling other agricultural products and working as agricultural laborers, some farmers also earn additional income through livestock farming. Informant 2 stated:

> *"Income from porang is not available every month, so I sometimes work as a construction laborer. I save the money I earn for unexpected expenses."*

This statement indicates that Informant 2 utilizes employment outside the agricultural sector as an alternative source of income. Working as a construction laborer is a strategy adopted to cope with the uncertainty of seasonal income generated from porang farming. Besides supplementing household income, these earnings are also saved as emergency funds to meet unforeseen expenses. This finding reflects farmers' awareness of the importance of financial preparedness in managing economic risks.

Meanwhile, Informant 3 obtained additional income from a small retail business managed together with family members.

> *"I run a small grocery shop at home. The income from selling daily necessities is used to cover our household expenses."*

The informant's statement shows that small-scale retail businesses represent one form of income diversification outside the agricultural sector. The involvement of family members in managing the grocery business provides an additional and relatively stable source of income that can be used to meet regular household needs. Consequently, this small business functions as a more stable source of earnings compared with income from porang farming, which depends heavily on the harvesting season.

The interview findings indicate that porang farming households diversify their income through both agricultural and non-agricultural sectors. These findings are consistent with Hidayat (2023), who argues that farm diversification refers to the practice of developing multiple agricultural enterprises rather than relying on a single commodity or crop. By diversifying farming activities, farmers can reduce the risks associated with fluctuations in the prices of individual commodities. The findings also support the argument of (Bojnec & Knific, 2021), who state that income diversification encompasses various income sources, including primary agricultural production, off-farm employment, trading or service activities, and investments in other sectors. Such diversification reduces the risk of income loss and enhances the economic stability of farming households.

The findings further demonstrate that income diversification among porang farming households represents an adaptive strategy for addressing the uncertainty of income generated from their primary farming activities. Because porang cultivation requires a relatively long harvesting period, farmers do not receive regular cash inflows and therefore take advantage of available economic opportunities in both agricultural and non-agricultural sectors. This diversification not only increases total household income but also reduces the risk of income loss when one source of earnings declines. These findings suggest that farming households possess the capacity to adapt to changing economic conditions by utilizing available resources effectively. In addition to increasing household income, diversification provides greater financial flexibility in meeting daily household needs without having to wait for the porang harvest. Income generated from other activities, such as small-scale trading, livestock farming, and employment outside agriculture, enables households to maintain continuous consumption and minimizes the economic pressure resulting from fluctuations in porang prices. Therefore, income diversification functions not only as an economic strategy but also as an effective household risk management mechanism.

4.2 Additional Income Management Strategies of Porang Farming Households

The findings reveal that the additional income earned by porang farmers is not solely used to meet daily household needs but is also managed through various strategies to ensure the long-term economic sustainability of the family. One of the primary strategies is allocating additional income to meet essential household expenditures. This income is used to finance household consumption, children's educational expenses, electricity bills, and other routine household needs. In addition, some farmers set aside part of their additional income as savings or emergency funds. As explained by Informant 2:

> *"Income from porang is not available every month, so I also raise chickens and sell them whenever there is an urgent need. I save part of the money to prepare for the next planting season."*

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This statement illustrates that additional income is managed not only to meet short-term household needs but also to support long-term financial planning. Revenue from livestock sales serves as an emergency fund while also providing capital for the following planting season, including the purchase of seeds, fertilizers, and other production inputs. This finding demonstrates a financial management strategy oriented toward the long-term sustainability of farming activities.

Another strategy identified in this study is the allocation of additional income as working capital for porang farming. Informant 4 explained:

> *"Whenever I receive additional income, I try to divide it. Part of it is used for household expenses, while the rest is allocated to purchasing fertilizer and porang seeds so that the farming business can continue operating."*

The statement made by Informant 4 indicates that the farmer has implemented income management based on priority needs. Additional income is allocated between household consumption and investment in farming activities. This strategy reflects the farmer's ability to balance current household needs with the long-term sustainability of agricultural production, thereby contributing to greater household financial stability.

Based on the interview findings, it can be concluded that the farmers allocate their income according to priority needs, including household consumption, savings, and farming capital. This condition demonstrates the implementation of financial management practices aimed at maintaining the sustainability of farming activities while simultaneously fulfilling household needs. These findings are consistent with Hariyani (2022), who argues that farming households require financial literacy and financial management skills to improve family welfare.

The findings further reveal that most farmers have adopted priority-based financial management principles, although these practices remain relatively simple and are not yet supported by systematic financial record-keeping. Additional income is first allocated to meet essential household needs, after which a portion is reserved as savings or reinvested as farming capital. This pattern reflects farmers' awareness of the importance of balancing household consumption with the long-term sustainability of their farming enterprises, ensuring that porang cultivation can continue during subsequent planting seasons.

The way farmers manage their income also reflects the application of prudent financial management principles in responding to economic uncertainty. By setting aside part of their income as reserve funds, farmers are better prepared to cope with unexpected expenses and income reductions resulting from fluctuations in porang prices. This strategy represents an important indicator that farming households are actively strengthening their economic resilience through more structured financial management practices.

4.3 The Role of Additional Income in Maintaining Household Financial Stability

Additional income plays an important role in maintaining the financial stability of porang farming households. The availability of alternative income sources enables farmers to meet household needs during the period before harvest and when porang prices decline.

Informant 3 stated:

> *"My wife and I run a small grocery business at home. The income from that business helps cover our household expenses when porang prices fall or before the harvest season."*

The informant's statement indicates that the grocery business serves as an alternative source of income capable of maintaining household economic stability when the primary source of income declines. The existence of this business enables the family to continue meeting its daily needs without relying entirely on income generated from porang farming. Therefore, additional income functions as a mechanism for protecting farming households against the risks associated with fluctuations in agricultural income.

The statement further demonstrates that additional income serves as an alternative source of earnings capable of reducing the risk of household economic instability. The availability of other income sources enables families to continue meeting their daily needs even when income from porang farming decreases. These findings are consistent with Airlangga et al. (2023), who argue that households possessing stronger economic adaptability and effective resource management strategies are better able to maintain household economic resilience when confronted with income shocks.

Additional income performs a broader function than merely increasing total household earnings. The findings of this study demonstrate that additional income serves as an important financial resource for meeting various household needs, including food consumption, children's education, healthcare, and farming capital. The existence of multiple income sources reduces farmers' dependence on porang harvests and mitigates the economic pressure caused by fluctuations in market prices. These findings indicate that additional income contributes significantly to strengthening the economic resilience of farming households.

Furthermore, having multiple sources of income enables farming households to maintain a more stable cash flow throughout the year. This financial stability is essential for ensuring the continuity of farming activities because farmers remain capable of financing production costs even before the harvesting period begins. Therefore, additional income not only supports household consumption but also contributes to the long-term sustainability of porang farming enterprises.

4.4 Challenges in Managing Additional Income

Although additional income provides substantial benefits, this study identified several challenges in its management. One of the primary challenges is the high level of household expenditure, which often results in additional income being fully spent on daily consumption.

Informant 3 explained:

> *"Sometimes the additional income is completely used for daily expenses because our family has many needs. However, if there is any money left, I usually save it for unexpected situations."*

The informant's statement indicates that the high level of household needs is the main challenge in managing additional income. Most of the additional earnings are allocated to daily household consumption, leaving only limited opportunities for saving. Nevertheless, the informant still attempts to set aside part of the income whenever possible as emergency savings. This finding suggests that household financial management among porang farmers remains strongly influenced by high household expenditures and limited income. Furthermore, some farmers do not maintain regular financial records, making it difficult to accurately monitor household income and expenditures. This condition may reduce the effectiveness of additional income management in the long term.

The challenges experienced by farming households indicate that higher income does not necessarily translate into better financial management. The substantial household consumption burden causes most additional income to be spent immediately on meeting daily needs, leaving limited capacity for savings. These findings suggest that limited income and high household expenditures remain major obstacles to achieving household financial stability. In addition to income constraints, the lack of regular financial record-keeping also hinders effective household financial management. Without proper financial records, farmers face difficulties in evaluating their financial condition and planning future income allocation. Therefore, improving financial literacy through training and mentoring programs is considered an important strategy for enhancing the financial management capabilities of farming households.

4.5 Additional Income Strategies of Porang Farming Households

The findings indicate that the primary strategy adopted by porang farming households in Bulukumpa District to maintain economic stability is income diversification. This strategy is implemented because porang farming alone is unable to provide regular monthly income. The relatively long harvesting period and fluctuations in porang prices prevent farmers from receiving continuous earnings, while household needs must be fulfilled throughout the year. Consequently, farmers take advantage of various economic opportunities that generate income while waiting for the next porang harvest.

The interviews revealed that farmers obtain additional income through on-farm, off-farm, and non-farm activities. Within the on-farm sector, farmers utilize their land to cultivate other agricultural commodities, such as rice, chili peppers, cloves, coffee, coconuts, and bananas, all of which have shorter harvesting periods than porang. Income generated from these commodities provides a more regular source of earnings that enables households to meet their daily needs while waiting for porang to be harvested. In addition, several farmers earn income through off-farm activities, such as working as agricultural laborers during harvesting seasons on other farmers' land. Others engage in non-farm activities, including construction work, operating small grocery stores, and livestock farming, as alternative income-generating activities outside the agricultural sector.

This diversification strategy demonstrates that farmers seek not only to increase household income but also to reduce dependence on a single source of earnings. By generating income from multiple sources throughout the year, households are able to maintain a more stable cash flow even when income from porang farming is unavailable. Additional income enables farmers to meet their daily needs without selling productive assets or discontinuing porang cultivation. Therefore, income diversification represents an important economic adaptation strategy that enables farming households to cope with the seasonal nature and high level of uncertainty associated with porang cultivation.

These findings are consistent with Mudatsir, Studi, Fakultas, Makassar, and Pendapatan (2021), who argue that farming households generally obtain income from on-farm, off-farm, and non-farm activities as a strategy for maintaining household economic sustainability when primary agricultural income is unavailable. Likewise, Wan, Li, Wang, Liu, and Chen (2016) explain that income diversification is an effective strategy for reducing the risk of income loss and improving the economic stability of farming households. Therefore, the additional income strategies implemented by porang farmers in Bulukumpa District serve not only as alternative income sources but also as adaptive mechanisms that enable households to continue meeting their needs until the next porang harvesting season.

4.6 Management of Additional Income in Porang Farming Households

The interview findings indicate that most farmers allocate their additional income according to a priority-based financial management approach. The highest priority is meeting essential household needs, including food purchases, electricity bills, children's educational expenses, and other daily necessities. Once these essential needs have been fulfilled, part of the remaining income is saved as emergency funds to be used when unexpected expenses arise or when income from porang farming is unavailable. In addition, several informants allocate a portion of their additional income as working capital for porang farming, including the purchase of seeds, fertilizers, and other production inputs required to sustain cultivation until the following harvest season.

This financial management pattern indicates that farmers have adopted simple financial management practices by prioritizing the allocation of income according to household needs. Although most informants do not maintain written financial records, they have developed the habit of dividing their income between short-term household consumption and long-term farming investments. This practice helps farmers sustain their farming activities while reducing the risk of financial difficulties during the waiting period before the porang harvest. However, the study also found that high household expenditures frequently result in additional income being fully allocated to daily consumption, leaving only limited funds available for savings. This finding suggests that farmers' financial management capabilities still require improvement, particularly in terms of financial record-keeping, budgeting, and the systematic establishment of emergency savings. Better financial management would enable additional income not only to satisfy current household needs but also to strengthen household economic resilience when facing uncertainty in porang farming income.

These findings support Hariyani (2022), who emphasizes that household financial management skills play an essential role in improving the welfare of farming families. Similarly, Inkam (2022) argues that effective household financial management involves planning, allocating, and controlling the use of income so that both current and future household needs can be met in a balanced and sustainable manner.

5. Conclusions

This study demonstrates that porang farming households in Bulukumpa District, Bulukumba Regency, maintain household financial stability by implementing income diversification strategies across both agricultural and non-agricultural sectors. Additional income is generated from the cultivation of other agricultural commodities, agricultural labor, construction work, small-scale retail businesses, and livestock farming. This income is managed according to a priority-based allocation system to meet household needs, finance children's education, establish emergency savings, and provide working capital for porang farming. These strategies enable farming households to sustain their family economy during the relatively long porang harvesting period and to cope with fluctuations in commodity prices. The findings indicate that the ability to diversify income sources and manage additional income through planned financial practices constitutes a key factor in maintaining the financial stability of porang farming households.

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Author Contributions

AA contributed to the conceptualization, methodology, data collection, formal analysis, investigation, and original draft preparation of the manuscript. WOR contributed to the supervision, methodology, validation, manuscript review and editing, visualization, and final approval of the manuscript.

Conflict of Interest

The authors declare that there are no conflicts of interest regarding the publication of this article.

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